

**CALIFORNIA DEPARTMENT OF TRANSPORTATION
POSITION DUTY STATEMENT**

CLASSIFICATION TITLE	OFFICE/BRANCH/SECTION	
Electrical Engineering Technician II	District 5-Electrical Operations-Traffic Branch	
WORKING TITLE	POSITION NUMBER	EFFECTIVE DATE
	905-351-3627-xxx	04/01/2013

As a valued member of the Caltrans team, you make it possible for the Department to improve the mobility across California by being innovative and flexible; reporting to work regularly and on time; working cooperatively with team members and others; and treating others fairly, honestly and with respect. Your efforts are important to each member of the team, as well as those we serve.

GENERAL STATEMENT:

The employee is an Electrical Engineering Technician II under the direct supervision of the Senior Transportation Electrical Engineer who performs the duties as described below. This position is headquartered in Santa Cruz. The area of responsibility is Santa Cruz, Monterey & San Benito Counties. Travel to other portions of the District will occasionally be required.

TYPICAL DUTIES:

Essential (E)/Marginal (M)

40%(E) Field Reviews

Perform routine Traffic Electrical Engineering related to coordinated and isolated traffic signal systems. As part of Traffic Operations Management Information Systems Instructions (TOMIS), provide on-going surveillance and timing of such systems. Assist in the development of time-space diagram and applying intersection capacity analysis principles that facilitate traffic control.

Responsible for record keeping of timing parameters of all traffic signals in the District as part of public record and historical data.

Review the effectiveness and initiate modifications to traffic signal systems and highway lighting systems such as changeable message signs, ramp metering, and highway lighting systems, etc.

Assist electrical engineering staff with field work including traffic management system.

- 15%(E) Construction and Permits Inspection
- Assist Construction and Permits by turning on new and modified traffic signals and providing electrical expertise to inspections.
- 10%(E) Reviews
- Review electrical plans, specifications and estimates prepared by Caltrans consultants and other agencies for operational characteristics and make comments as required in the Caltrans Signal and Lighting Design Guide and the California Manual of Uniform Traffic Control Devices.
- 10%(E) Obtain Intersection Data
- Conduct complete intersection studies, including but not limited to turning movement counts.
- 10%(E) Software Operation
- Install, duplicate and check programs for new and existing traffic control systems.
- Perform routine traffic signal software testing and debugging in conjunction with software development efforts.
- 5%(E) Assist Maintenance Department
- Make recommendations to Senior Transportation Electrical Engineer to initiate corrective changes and report needed work to the Maintenance Branch.
- Add technical support during electrical systems failure
- 5%(E) Internal Contacts
- Prepare correspondence related to electrical systems. Communicate verbally and in writing with Caltrans staff.
- 5%(M) Record Keeping
- Assist legal staff in retrieving electrical engineering field data. Maintain required records related to electrical systems.

SUPERVISION EXERCISED OVER OTHERS

This position does not require supervision of others.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

This position requires general understanding of the theory and practice of traffic engineering and electrical engineering as applied to traffic signal system operations. Requires more familiar knowledge of current State hardware and software available and under development. Ability to work with traffic signal system software development personnel in development of new and updated software.

CONSEQUENCE OF ERROR

Decisions regarding the type, design, and operation of highway lighting and traffic control systems affect the safe and efficient operation of the state highway system in the district, especially at intersections and interchange areas. Decisions and actions may also affect tort liability.

PUBLIC AND INTERNAL CONTACTS

Both public and internal contact with others is made on a regular basis by phone, in person, and in writing. Employee should be able to communicate clearly concerning technical data. The District Electrical Operations Engineer will review external correspondence prior to mailing.

WORK ENVIRONMENT

While at their base of operation, employee will work in a climate-controlled office under artificial lighting. Employees will also be required to travel and work outdoors and may be exposed to dirt, noise, uneven surfaces, proximity to high-speed traffic or temperature extremes. Occasionally some work may need to be performed at night.

PHYSICAL, MENTAL AND EMOTIONAL REQUIREMENTS

The incumbent may be required to sit or stand for long periods of time using a personal computer and working in the field. Large or heavy files and equipment will have to be moved and installed. Travel and meetings may extend into the evenings or require an overnight stay.

I have read and understand the duties listed above and can perform them with/without reasonable accommodation. (If you believe you may require reasonable accommodation, please discuss this with the hiring supervisor. If you are unsure whether you require reasonable accommodation, inform the

hiring supervisor who will discuss your concerns with the Reasonable Accommodation Coordinator.)

EMPLOYEE

DATE

I have discussed with and provided a copy of this duty statement to the employee named above.

SUPERVISOR

DATE